

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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IN RE APPLICATION OF:)
THEODORE SIRKIN)
SERIAL NO.:)
FILED: CONTEMPORANEOUSLY HEREWITH) GROUP ART UNIT NO.
TITLE: WATER SPRINKLER HEAD)
WITH INTEGRAL OFF-ON)
WATER FLOW CONTROL VALVE)
AND ADAPTIVE FITTINGS)
THEREFOR)
EXAMINER:)

STATEMENT OF RELATED INFORMATION

Commissioner of Patents
and Trademarks
Washington, D.C. 20231

Sir:

The applicant in the above-identified patent application identified the following prior art which may have relevance to the subject matter of the present application:

<u>Patentee(s)</u>	<u>Patent No.</u>	<u>Date</u>
Wang	5,360,172	11/1/1994
Jeanmaire	1,412,468	4/11/1922
Brooks	1,639,162	8/16/1927
O'Brien et al.	1,059,753	4/22/1913

Riley	2,902,708	9/8/1959
Tullis	2,285,689	6/9/1942
Mihara	5,937,451	8/17/1999
Castell et al.	5,558,113	9/24/1996
Fuller	4,813,605	3/21/1989
Hooker	1,272,263	7/9/1918
Hruby, Jr.	2,899,978	8/18/1959
Hruby, Jr.	2,810,607	10/22/1957
Hruby, Jr. et al.	3,342,423	9/19/1967
Hruby, Jr.	2,963,264	12/6/1960
Rosenberg	4,819,872	4/11/1989
Dyck	3,517,886	6/30/1970
Burns et al.	5,836,517	11/17/1998
Manos	5,526,845	6/18/1996

Caruso et al.	4,815,566	3/28/1989
Eveleigh et al.	6,042,015	3/28/2000
Stroebe1	1,584,199	5/11/1926
Wang	6,073,863	6/13/2000
Hellman	4,516,724	5/14/1985
Mayer	581,358	4/27/1897
Schwartz	1,127,683	2/9/1915
James	3,840,208	10/8/1974
Byerly et al.	6,056,155	5/2/2000

COMMENTS ON THE PRIOR ART REFERENCES:

1. Wang, '172

A control valve having an elongate duct with a pin 20 spring biased out of a position of insertion into the duct 11. The pin, however, has a size significantly smaller than the size of the duct. Nevertheless, there is a reduced portion 143.

2. Jeanmaire '468

A control valve which is capable of being turned by a user so that an opening in a pin becomes aligned with the valve duct.

3. Brooks '162

A spraying device in which a control pin extends into a duct perpendicular to the axis of the duct and has a work tool receiving end.

4. O'Brien et al., '753:

A valve stem is shifted by means of a handle 15 and has a hole 9 alignable with a duct in the valve. When so aligned, water will flow through the valve.

5. Riley '708:

A shiftable valve plunger shifts a plug into and out of a fluid passageway in an angle almost perpendicular to that of the passageway.

6. Tullis '689:

5 A needle valve is shifted by a rotatable handle to insert a needle into and out of a perpendicularly located passageway.

7. Mihara '451:

A bidet apparatus in which a valve plug is biased against the action of a screw and includes an opening 40 alignable with the main passageway 21 when aligned therewith.

8. Castell et al., '113:

5 A wire strand cleaner but which includes a pair of passageways having screws capable of being threaded into the passageways as best shown in Figure 4 thereof. When screwed completely into the passageways they are designed to block fluid flow therethrough.

10 9. Fuller '605:

A screw having a work tool end 64 is capable of being threaded into and out of a passageway at a position almost perpendicular to that passageway.

10. Hooker '263:

15 A gas nozzle having orifices and the patent discloses a rotatable stop clock, referred to as a "holder", and is provided with a bore 9, such that when the holder is rotated in one position, the bore 9 allows communication from an inlet duct to an outlet port and when rotated in the opposite direction will block
20 that fluid flow.

11. Hruby, Jr., '978:

A flow restrictor for a lawn sprinkler system. A plug is shiftable against the action of a spring to a closed position and to an open position in response to rotation of the screw head.

25 12. Hruby, Jr., '607:

A flow action restrictor similar to that construction shown in Hruby, Jr., '978.

13. Hruby, Jr. et al., '423:

A valve stem is rotatable and has a duct which may become aligned with an outlet orifice in response to rotation thereof.

14. Hruby, Jr., '264:

5 A flow restrictor having a valve stem with a plug thereon. When the plug is rotated to shift downwardly in the body it is received within the cylindrical wall 25 so that grooves 40 and 41 provide a passageway therethrough.

15. Rosenberg '872:

10 A water sprinkler head in which a rotatable valve stem controls water flow from a duct. A control knob on the exterior of the valve controls the position of a nozzle 8.

16. Dyck '886:

15 A lawn sprinkler nozzle in which a sprinkler head is shiftable with a screw action on a valve stem 11. The position of the nut 12 on the stem 11 controls the amount of opening for a desired spray pattern.

17. Burns et al. '517:

20 A spray gun having a discharge duct with a discharge orifice in which flow rate is a function of feed pressure. A valve member 26 is set against a valve 25 in response to rotation of the valve member 26. Rotation of the valve member 26 is a result of manual actuation through a trigger 19.

18. Manos '845:

25 A sleeve 104 is provided with a pair of opposed inlet apertures 124a and 124b adjacent to an outlet aperture 126 and in communication with a duct.

19. Caruso et al. '566:

A drain system having a drain valve in which valve actuation is accomplished with a small tool such as a screwdriver or allen-head wrench. A plug 11 bears axially against the outlet
5 of an axial duct and is shiftable in response to manual actuation with a tool.

20. Eveleigh et al. '015:

A proportional mixing valve which has a plug 50 shiftable from a closed position as shown in Figure 4 to an open position as
10 shown in Figure 5 of Eveleigh '015. There is no screw type valve as taught in the present application.

21. Stroebel '199:

A welding torch having an actuating hand engageable handle 20 which shifts a plug into and out of an axial duct and has
15 an end thereof which can shift within a recess opposite to the plug. This device is designed for control of gases through the ducts 16 and 17.

22. Wang '863:

A hose nozzle having a control member 20 primarily in the nature of a plug 21 which is operable against a coil spring 26 and
20 is disposed in a water duct 12. When the plug 21 is pressed against a channel 13, the water duct is sealed. The plug includes a hole 234 which can control communication responsive to the actuation of the handle.

23. Hellman '724:

A stop cock is located in a valve and is rotatable such that an opening in the stop cock is alignable with a fluid flow

duct in one position and is out of alignment with the fluid flow duct in another position. The opening in the stop cock, however, has end of a substantially larger diameter than the opposite end. Moreover, it is rotatable by means of a handle 119.

5 24. Mayer '358:

A shut-off coupling, primarily for use with the hose, such as a garden hose. In this case, however, a pair of oppositely disposed screws are shifted by means of a handle C. Valve plates D are openable and closeable in response to rotation of the screws.

10 26. James '209:

A flow rate control device which in a first embodiment, employs a screw operating against an elastically deformable material bearing against the body of the screw. The body of deformable material operates as a plug. In another embodiment, a screw, as shown in Figure 3, is threaded into a duct and can block fluid flow when shifted axially into that duct.

27. Byerly et al., '155:

liquid dispenser for dispensing a hot melt which uses a valve stem operable with a needle 16. The valve is a complex device using air introduction and exit as well.

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25. Schwartz '683:

A screw valve is used to regulate the size of oppositely disposed communicating ports. One of the ports is provided with a regulating valve and a fountain cup is mounted over the ports and the regulating valve.

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Respectfully submitted,



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